

BIOLOGY

BOOKS - NTA MOCK TESTS

NTA NEET SET 31

Biology

1. Arrange these hominids in ascending order of their cranial capacities .

A. Java man \rightarrow Homo habilis \rightarrow

Neanderthal man

B. Homo habilis ightarrow Java man

Neanderthal man

C. Neanderthal man \rightarrow Homo habilis \rightarrow

Java man

D. Homo habilis \rightarrow Neanderthal man \rightarrow

Java man

Answer: B



2. A RBC and a plant cell (with thick cell wall) are placed in distilled water. The solute concentration is the same in both the cells. What changes would be observed in them

A. Both plant cell and RBC would not undergo change

B. The RBC would increase in size and burst, while the plant cell would remain about the same size

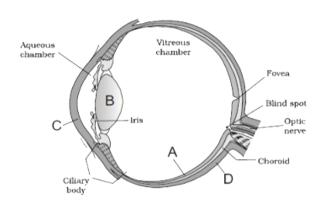
C. The plant cell would increase in size and burst, while the RBC would remain about the same size

D. Both plant cell and RBC would decrease in size and collapse

Answer: B



3. Given below is a diagram showing different parts of an eye



Some parts are labeled as A,B,C and D.

Read the following statements about these parts and choose the correct one

A. The eyeball contains C, Which is held in place by ligaments attached to the

ciliary body.

- B. The space between B and C is filled with a transparent gel called the vitreous humour.
- C. Light rays of visible wavelength focus on
 - A through B and C and generate impulses in the photoreceptor cells of the eye.
- D. D is the external layer, which is made up of loose connective tissue.

Answer: C



- **4.** Modified polysaccharides acting as a ground substance is found in :
 - A. Epithelial tissue
 - B. Connective tissue
 - C. Muscular tissue
 - D. Neural tissue

Answer: B



- **5.** In context of Amniocentesis, which of the following statement is incorrect?
 - A. It is usually done by the collection of the amniotic fluid surrounding the foetus.
 - B. It is used for prenatal sex determination

C. It can be used for detection of Down syndrome

D. It can be used for detection of Cleft palate

Answer: D



6. The plant rose is placed under two taxa Rosales and Rosaceae. Which of the following is correct about these?

- A. Rosales is order and Rosaceae is family
- B. Rosales is order and Rosaceae is order
- C. Rosales is tribe and Rosaceae is family
- D. Rosales is family and Rosaceae is tribe

Answer: A



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7. A patient comes to doctor's clinic situated on the 6th floor by walking up the staircase. As soon as he reaches the clinic, the nurse

records his blood pressure as 148/92 mm Hg.

Which of these statement is surely correct?

A. The patient has high blood pressure and is definitely having hypertension

B. The patient has high blood pressure and

is definitely not having hypertension

C. The patient has high blood pressure but

may or may not have hypertension

D. the pointer has high blood pressure due

to coronary heart disease

Answer: C



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- **8.** 1. pH of blood : (P)
- 2. Blood forms (W) % of the total body weight
- 3. Proteins form (Pr) % of plasma
- 4. The thickness of RBC: (R) micrometer The

CORRECT arrangement of the above values is

A.
$$W>P>Pr>R$$

$$\mathsf{B.}\,W>Pr>P>R$$

$$\operatorname{C.} R > P > Pr > W$$

$$\mathrm{D.}\,W>R>P>Pr$$

Answer: A



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9. Epipetalous and epiphyllous condition are respectively seen in :

A. Lily and Brinjal

B. Onion and Brinjal

C. Brinjal and Lily

D. Mustard and Onion

Answer: C



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10. A person was advised to do urine tests and a blood tests for glucose. Glucose was detected in his urine. He was not taking any medications. Which of the following values will

correspond to the amount of glucose in the blood of a person ?

- A. 200 mg of glucose per 100ml of blood
- B. 140 mg of glucose per 100ml of blood
- C. 120 mg of glucose per 100ml of blood
- D. 100 mg of glucose per 100ml of blood

Answer: A



11. How many of the following are the members of the family Fabaceae ?

Gram , belladonna, arhar , moong , potato , Indigofera , pea , tobacco , Sesbania

A. five

B. six

C. seven

D. four

Answer: B



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12. Which of these is true about the type of parthenogenesis?

A. In arrhenotoky, only males are produced by parthenogenesis while in thelytoky only females are produced by parthenogenesis.

B. In arrhenotoky , only females are produced by parthenogenesis while in

thelytoky only males are produced by parthenogenesis.

C. In arrhenotoky , only either males or females are produced by parthenogenesis while in thelytoky only females are produced by parthenogenesis.

D. In arrhenotoky, only males are produced by parthenogenesis while in thelytoky

only either males or females are produced by parthenogenesis.

Answer: A



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13. The condition with the united calyx in a flower is called as

A. Gamosepalous

B. Polysepalous

- C. Polypetalous
- D. Gamopetalous

Answer: A



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- 14. WIDAL test is used for the detection of
 - A. Disease caused by a protozoan called

Trichomonas

- B. Disease caused by a rod shaped bacterium called Salmonella typhi
- C. Disease caused by a spherical bacterium called N. gonorrhoea.
- D. Disease caused by a spiral bacterium called Treponema pallidum

Answer: B



- **15.** The type of embryo sac discovered by Strassburger in Polygonum plant,
 - A. Has seven called seven nucleated structure and is bisporic.
 - B. Has seven called seven nucleated structure and is monosporic.
 - C. Has seven called eight nucleated structure and is bisporic.

D. Has seven called eight nucleated structure and is monosporic.

Answer: D



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16. During human pregnancy, when is the first movement of the foetus observed?

A. At the end of first trimester

B. At the end of second trimester

- C. At 20 weeks of gestation
- D. At 16 weeks of gestation

Answer: C



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17. In angiosperms,nuclei participate in fertilization.

A. 2

B. 4

C. 5

D. 7

Answer: C



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18. Identify the correct match between the types of stem modifications and their

examples.

Column I	Column II
i. Stem tendril	a. Citrus
ii. Fleshy photosynthetic stem	b. Strawberry
iii. Woody thorns	c. Watermelon
iv. Underground horizontal stem	d. <i>Opuntia</i>

A. i-a,ii-d,ii-b,iv-c

B. i-d,ii-c,iii-b,iv-a

C. i-a,ii-b,iii-c,iv-d

D. i-c,ii-d,iii-a,iv-b

Answer: D



19. Total number of meiotic division required for forming 100 zygotes/100 grains of wheat is

- A. 50
- B. 125
- C. 75
- D. 100

Answer: B



20. Among the statement given below, which statements /s is / are correct regarding the relationship between enzyme and substrate?I. Above a certain concentration of substrate , an enzyme reaches its maximum rate of reaction

II. Increasing the substrate concentration to a higher level doesn't reverse the effects of a competitive inhibitor.

III At high substrate concentration, a non competitive inhibitor no longer affects the

enzyme activity.

IV. The higher the concentration of substrate the faster an enzyme can cataylse a reaction.

A. I and II only

B. I,II and IV

C. I only

D. III and IV only

Answer: C



- **21.** The microbe also known as 'brewer's yeast' is
 - A. A rod shaped bacterium called

 Lactobacillus
 - B. An eukaryotic fungi called as S .

 Cerevisiae
 - C. A spherical bacterium called
 - D. A spherical bacterium called streptococci

staphylococci

Answer: B



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22. A male human, Y-chromosome and Autosomes and is also hemizygous for autosomal gene A and B and is also hemizygous for hemophilic gene h. What proportion of his sperms will be about

A.
$$\frac{1}{16}$$

B.
$$\frac{1}{4}$$

c.
$$\frac{1}{8}$$

$$\mathsf{D.}\;\frac{1}{32}$$

Answer: C



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23. What is the genetic meterial of tobacco mosaic virus?

A. Double stranded RNA

B. Double stranded DNA

C. Single stranded RNA

D. Single stranded DNA

Answer: C



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24. Complete the following by selecting the correct option for the blanks A , B and C from the options given below.

The symbiotic association formed by fungi with roots of higher plants is known as A....it is mainly formed by members from the genus.... B..... The fungal symbiont in these associations is responsible for absorbing.....C.....from the soil and passing it to the plant. It also has many other benefits like resistance to root borne pathogens tolerance to salinity and droughts, etc.....D..... Seeds cannot germinate and establish without the presence ofA

A. A: Lichen, B: Rhizobium, C: Phosphorus,

D: Cycads

B. A: Mycorrhiza, B: Glomus, C: Potassium,

D: Cycads

C. A: Mycorrhiza, B: Glomus, C: Phosphorus,

D: Pinus

D. A: Lichen, B: Rhizobium, C: potassium,

D: Pinus

Answer: C



25.	Which	of these	options	is	categorized	as	a
lect	tin ?						

- A. Abrin
- B. Ricin
- C. Concanavalin A
- D. None of these

Answer: C



26. Which of these is the correct evolutionary line of mammals? A. Sauropsids ightarrow Synapsids ightarrowTherapsids \rightarrow Mammals B. Sauropsids ightarrow Suropsids ightarrowTherapsids \rightarrow Mammals C. Sauropsids ightarrow Therapsids **Mammals**

D. Suropsids \rightarrow Therapsids \rightarrow Mammals

Answer: D

27. The correct sequence of the first six amino acids in HbA beta globulin peptide is

A. Valine - Histidine - Leucine - Threonine -

Proline - Glutamic acid

B. Valine - Histidine - Leucine - Proline -

Glutamic acid - Threonine

C. Leucine - Valine - Histidine - Threonine -

Proline - Glutamic acid

D. Valine - Histidine - Leucine - Threonine -

Proline - Valine

Answer: A



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28. Identify the blanks A and B

During MOET procedure done in a cow, the fertilised eggs at (A....) Cells stage are recovered (B) and transferred to surrogate mother.

A. A: 16 - 64, B: surgically

B. A: 16 - 64, B: non - surgically

C. A: 8 - 32, B: surgically

D. A: 8 - 32, B: non-surgically

Answer: D



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29. NADP reductase enzyme is present

A. In the mitochondrial matrix

- B. in the lumen of thylakoid
- C. One the stroma of thylakoid
- D. One the inner side of the thylakoid membrane.

Answer: C



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30. Which of. These statements about

Mycoplasma is / are true?

I. Mycoplasma is the smallest cell known.

II. They are not prokaryotic in nature.

III. They can respire only in the presence of oxygen.

IV. They lack cell walls.

A. I and II

B. I and IV

C. I, II and III

D. II and IV

Answer: B



31. The amount of nutrients, such as carbon, nitrogen, phosphorus, calcium, etc. Present in the soil at any given time I reffered to as

A. standing state

B. standing crop

C. standing soil

D. standing earth

Answer: A



32. Which of the following is the correct about the humus ?

A. Black colored organic and inorganic material

B. Dark brown colored crystalline organic and inorganic material

C. Black colored crystalline organic and inorganic material

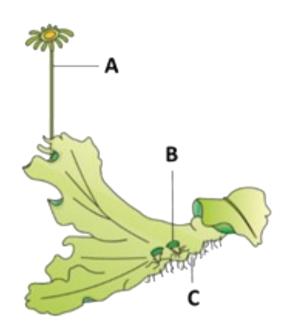
D. Dark brown colored amorphous organic material

Answer: D



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33. Observe the below diagram . Identify the option suggesting the correct functions of A ,



A. A: Helps in formation of vegetative cells and can regenerate into new individual by fragmentation , B : Helps in attachment to the substratum , C:

- Produces female gametes for sexual reproduction,
- B. A: Helps in formation of vegetative cells and can regenerate into new individual by fragmentation , B: Produces female gametes for sexual reproduction , C:

C. A: Produces female gametes for sexual reproduction, B: Help in formation of vegetative cells and can regenerate into

Helps in attachment to the substratum

new individual by fragmentation, C:

Helps in attachment to the substratum

D. A: Produces female gametes for sexual reproduction B: Helps in attachment to the substratum

C: Help in formation of vegetative cells and can regenerate into new

Answer: C



34. If we accept May's global estimates, then the total species that have been recorded so far are about

- A. $12\,\%$
- $\mathsf{B.}\ 22\ \%$
- $\mathsf{C.}\ 32\ \%$
- D. 42%

Answer: B



35. The evil quartet represents

- A. Four major causes of biodiversity losses
- B. Four major causes of ozone depletion
- C. Four major causes of global warming
- D. Four major causes of water pollution

Answer: A



36. Diabetes mellitus may be treated using insulin from genetic engineering . Where is this insulin produced ?

- A. Bacterial cytoplasm
- B. Bacterial nucleus
- C. Human liver
- D. Human pancreas

Answer: A



- 37. In an electrostatic precipitator,
 - A. The velocity of air between the plates must be very high to purify the air.
 - B. The electrode wires maintained at several thousand volts produces a corona which releases positively charged particles.
 - C. Particulate matter that are very small can be removed by precipitation

D. Collecting plates are grounded and

collect negatively charged dust particles

Answer: D



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38. A Mendel's law which does not have any exception is

A. Law of dominance

B. Law of segregation

- C. Law of independent assortment
- D. None have all exceptions

Answer: B



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39. Ichthyosaurs are

- A. Large marine reptiles which are presently found in oceans
- B. Large marine reptiles which are extinct

C. Large marine fishes which are presently found in oceans

D. Large marine fishes which are extinct

Answer: B



40. Match the tissue / cell with its correct feature / function.

	Tissue		Feature/Function
Α	Exocrine gland	l	Facilitates communication by
			connecting the cytoplasm of
			adjoining cells.
В	Endocrine gland		Chemical messenger are
			secreted directly into the fluid
			connective tissue
С	Gap Junctions	111	Either cuboidal or columnar
			epithelium adapted for
			secretory function
D	Goblet cells	IV	Secretes mucus, saliva,
			digestive enzyme and other
			cell products

A. A-I,B-III,C-IV,D-II

B. A-III,B-IV,C-II,D-I

C. A-IV,B-II,C-I,D-III

D. A-II,B-I,C-III,D-IV

Answer: C



- **41.** Read the following statements:
- I. Eukaryotic cell walls contain peptidoglycans in addition to cellulose.
- II. Plasmodesmata and centrioles are found in all plant cells.
- III. Plant cell contains 80s ribosomes which they use to manufacture proteins.
- Iv. Amyloplasts are a type of plastids found in a

plant cell that help so store carbohydrates.

Identify the statements that are INCORRECT regarding plant cell.

- A. I and II only
- B. I,II III and IV
- C. II and IV only
- D. I and III only

Answer: A



- **42.** From the following, the statement /s that will help to determine the specificity of an enzyme is /are:
- I. The bonding between R groups of amino acids of the polypeptide
- II. The optimum pH of the enzyme
- III. The peptide bonds between amino acids of the polypeptide
- IV. The shape of the substrate molecule
 - A. I,II,III and IV
 - B. I and III only

C. I only

D. II,III and IV only

Answer: C



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43. From the following, the correct appearance of a chromosome at the beginning of prophase of mitosis and the number of DNA strands in the chromosome is:

A. Appearance of one chromosome :

, Number of DNA strands: 2

B. Appearance of one chromosome :

, Number of DNA strands: 4

C. Appearance of one chromosome :

, Number of DNA strands: 1

D. Appearance of one chromosome :

, Number of DNA strands: 2

Answer: B

44. An electron micrograph of a plant cell shows two different types of them is known to store oils and fats in them, such a plastid is known as:

- A. Chloroplast
- B. Chromoplast
- C. Elaioplast
- D. Amyloplast

Answer: C



- **45.** Which feature of bacteria makes them especially useful in biotechnology?
 - A. They are often pathogens.
 - B. The have a unique genetic code .
 - C. They have cell walls.
 - D. They reproduce rapidly.

Answer: D



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46. What is the net gain of ATP in glycolysis?

A. four

B. three

C. two

D. six

Answer: C

47. A foreign gene is inserted in pBR322 using the restriction endonuclease EcoRl . Which of these is true about the E. coli having this pBR322?

A. It will be resistant to both antibiotic ampicillin as well as antibiotic tetracycline

- B. It will be resistant to antibiotic ampicillin but not resistant to antibiotic tetracycline
- C. It will be resistant to antibiotic tetracycline but not resistant to antibiotic ampicillin
 - D. It will be neither be resistance to antibiotic tetracycline nor to antibiotic ampicillin

Answer: A

48. Corn is a crop plant . Glow - worms are organisms which give off light . Which process could use these two species to make corn plants which glow ?

A. breeding the organisms together

B. causing mutations in the organisms

C. Selective breeding

D. transferring genes from one species to another species

Answer: D



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49. Epiphytes growing on trees is an example of

A. Mutualism

B. Commensalism

- C. Amensalism
- D. Parasitism

Answer: B



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50. Read the following statements about phylum Annelida. Identify the true and false statements and select the correct option after referring to the given table .

A. Annelids are diploblastic , metamerically

segmented, coelomate animals.

B. Their neural system consists of paired ganglia connected by lateral nerves to a single ventral nerve cord .

C. They process longitudinal and circular muscle fibres which help in locomotion .

D Nephridia help them in osmoregulation and excretion.

A. A: False, B: True, C: False, D: True

B. A: False, B: False, C: True, D: True

C. A: True, B: False, C: True, D: False

D. A: False, B: True, C: False, D: True

Answer: B



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51. Through photosynthesis , the lungs of earth, Amazon forest is estimated to produce of the total oxygen in earth's atmosphere .

A. One - third

B. One - fourth

- C. One fifth
- D. One sixth

Answer: C



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52. The correct statement about ptyalin and pancreatic amylase is :

A. Ptyalin breaks down only uncooked starch in acidic medium while pancreatic

- amylase breaks down only uncooked starch in alkaline medium.
- B. Ptyalin breaks down only cooked starch in alkaline medium while pancreatic amylase breaks down only uncooked starch in acidic medium
- C. Ptyalin breaks down only uncooked starch in acidic medium while pancreatic amylase breaks down only cooked starch in alkaline medium.

D. Ptyalin breaks down only cooked starch in acidic medium while pancreatic amylase breaks down only uncooked starch in alkaline medium.

Answer: D



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53. Which of the following statements regarding the structure of contractile proteins are correct?

I. Each actin filaments is made up of two 'F' actins, which are wound helically around each other.

II. Two types of troponins are distributed at regular intervals on the tropomyosin .

III. The globular head of meromyosin has binding sites for ATP and troponins.

IV myosin is a structure proteins which also has enzymatic activity.

A. II, III and IV

B. I and IV

C. I,II and III

D. II and IV

Answer: B



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54. The joint between the atlas and axis is an example of

- A. Pivot joint
- B. Ball and socket joint
- C. Hinge joint

D. Gliding joint

Answer: A



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- **55.** Which of the following statements regarding impulse transmission is incorrect?
- I . Chemicals called neurotransmitters are involved in impulse transmission across the synapses.
- II. The membranes of the pre synaptic and

post - synaptic neuron are separated by an empty space called the synaptic cleft.

III. The released neurotransmitters bind to the specific receptors present on the pre - synaptic membrane.

IV. The new potential which develops is always excitatory.

A. II and III

B. I, II and IV

C. I and III

D. II,III and IV

Answer: D



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56. Most of the cranial nerves in humans are:

A. motor

B. sensory

C. mixed

D. non-functional

Answer: A

- **57.** A tumour inducing autonomously replicating circular extra chromosomal DNA widely used in development of transgenic plant is that of
 - A. Escherichia coli
 - B. Bacillus thuringiensis
 - C. Staphylococcus aureus
 - D. Agrobacterium tumefaciens

Answer: D



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58. Which of the following organisms is known to be a jawless vertebrate?

- A. Petromyzon
- B. Scoliodon
- C. Pristis
- D. Trygon

Answer: A



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59. Mucus secreted by the goblet cells, combined with bicarbonates maintains the alkaline medium of the intestine. The source of bicarbonates is:

- A. Intestinal mucosa
- B. Gall bladdar
- C. Pancreas

D. Brunner's glands

Answer: C



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60. Which of the following is incorrect about cancer?

A. Metastasis is seen only in the case of a malignant tumor.

B. The activation of c-onc genes leads to development of tumors.

C. The patient are given substances called biological response modifiers such as alpha-interferons which activates their immune system and helps in destroying the tumor.

D. None of the above

Answer: D



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61. Which of the following statements regarding fertilization and implantation is incorrect?

- A. Fertilization can occur only if sperm and ovum simultaneously reach the ampullary isthmic junction of the fallopian tube .
- B. During fertilization, the sperm comes in contact with the corona radiata cells of

the ovum first and start degrading it.

- C. The division of the morula leads to the formation of blastocyst.
- D. The embryo is formed by the differentiation of inner cell mass.

Answer: B



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62. In flowering plants, haustorial cell is

- A. The cell of suspensor present at the micropylar end and formed during embryogenesis.
 - B. The cell of suspensor present at the chalazal end and formed during embryogenesis.
 - C. The cell of suspensor present at the micropylar end and formed during the formation of the endosperm.

D. The cell of suspensor present at the chalazal end and formed during the formation of the endosperm.

Answer: A



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63. Which of the following is a non - steroidal oral contraceptive ?

A. LNG - 20

- B. Progesterone only pills
- C. MALA- N
- D. Saheli

Answer: D



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- 64. Pollination in Vallisneria is
 - A. Entomophily
 - B. Epihydrophily

C. Hypohydrophily

D. Myrmecophily

Answer: B



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65. Match the endocrine glands gives in column I with their respective hormones in column II and the functions performed by those hormones in column III and select the hormones in column III and select the correct

option from the codes given below.

No.	Endocrine gland	No.	Hormone	No.	Column III (Functions)
ı	Neuorohypophysis	A	Cortisol	а	Hypoc alcemic hormo ne
II	Adrenal cortex	В	PTH	b	Prevents excessive urination
III	Thyroid gland	С	Vasopressin	С	Hyper calcemic hormo ne
IV	Parathyroid gland	D	тст	d	Anti- inflammatory reaction and suppression of immune response

A. I-C-b, II-A-d, III-B-c, IV-D-a

B. I-C-b, II-A-d , III-D-a, IV-B-c

C. I-C-b, II-A-d, III-D-c, IV-B-a

D. I-B-d, II-B-a, III-C-d, IV-A-b

Answer: B



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66. The exaggerated response of the immune system in which IgE type of antibody is called

A. Allergy

B. Auto immunity

C. Active immunity

D. Passive immunity

Answer: A



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67. The steps involved in spermatogenesis are given below. Arrange them in proper sequence and select the correct option.

A. Primary spermatocytes undergo the first meiotic division.

B. Spermatogonia multiply by mitotic division.

C. Transformation of spermatids into sperms.

D. Secondary spermatocytes undergo the second meiotic division.

E. Release of sperms from the seminiferous tubules.

A. A,C,B,E,D

B. B,A,C,D,E

C. B,A,D,C,E

D. C,D,E,A,B

Answer: C

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68. In Drosophila melanogaster,

A. White eye colour is dominant over red eye colour and its gene is located on autosome

B. Red eye colour is dominant over red eye colour and its gene is located on autosome

C. White eye colour is dominant over red eye colour and its gene is located on the X chromosome

D. Red eye colour is dominant over White eye colour and its gene is located on the X chromosome

Answer: D



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69. A woman whose mother was colourblind and father was haemophilic , marries a colourblind haemophilic man . What is true about their daughters ?

A. All their daughters are colourblind and haemophilic

B. They may have daughters who neither suffer from colourblindness nor from haemophilia

- C. They may have daughters who are colourblind or haemophilic
- D. Some of their daughters are colourblind but not haemophilic

Answer: C



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70. The heterocysts present in cyanobacteria are sites of

- A. Photosynthesis
- B. Nitrogen fixation
- C. Carbon dioxide assimilation
- D. Gaseous exchange

Answer: B



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71. The available biomass for the consumption to herbivores and decomposers in an ecosystem is

- A. Gross primary productivity
- B. Net primary productivity
- C. Secondary productivity
- D. Tertiary productivity

Answer: B



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72. The chrysophytes are also known as

A. A - golden algae, B- autotrophs, C - chains, D - iron.

B. A - dinoflagellates , B - saprotrophs, C - cell wall , D-calcium.

C. A - dinoflagellates , B - heterotrophs , C - cell membrane , D - phosphorous

D. A - golden algae, B- photosynthetic , C - cell wall, D - silica

Answer: D



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73. In a plant, tallness is dominant over dwarfness and red flowers are incompletely dominant over white flowers, the hybrid being pink. How many offsprings will be of tall height with pink flowers from a cross involved two plants each of which is hybrid tall and has pink flowers?

$$\frac{4}{16}$$

B.
$$\frac{6}{16}$$

c.
$$\frac{10}{16}$$

$$\mathsf{D.}\;\frac{2}{16}$$

Answer: B



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74. Which of the following belongs to

Rhodophyta?

- A. Polysiphonia
- B. Sphagnum
- C. Polytichum
- D. Dictyota

Answer: A



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75. The most important ecologically relevant environmental factor is

A. Temperature

B. Water

C. Light

D. Soil

Answer: A



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76. A student is about to appear for an examination in the next half an hour. He is extremely anxious. His face is flushed and his heartbeat has increased . Which of the following could be a probable reason for this ?

A. Secretion of sleep - regulating hormones

by the pineal gland

B. Secretion of glucocorticoids by the adrenal cortex

C. Secretion of TSH by the thyroid gland

D. Secretion of emergency hormones by

Answer: D

77. Which of the following is correct about seed dormancy?

- A. The seed dormancy can be overcome by subjecting the seeds to warm conditions or by application of certain chemicals like gibberellic acid and nitrites.
- B. An external environment like an impermeable and hard seed coat is

responsible for inducing seed dormancy

C. The presence of chemical inhibitors such as phenolic acids and para - ascorbic acid are internal factors that induce dormancy.

D. More than one option is correct.

Answer: C



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78. Read the following statements about a leaf.

Which amongst them are correct.

I.The swollen leaf- base mainly seen in leguminous plants is called the pulvinus.

II. The axillary bud arises from the axil formed by the leaf.

III. The leaf shape and size differs from plant to plant.

A. Only I

B. I, II and III

C. I and III

D. I and II

Answer: B



- **79.** Read the below Statements about the structure of genetic material and identify the correct ones.
- I. Adenine and guanine are bases that have a double ring structure, cytosine, thymine and uracil are based with a single ring structure.

II. An adenine nucleotide from DNA is the same as an adenine nucleotide from RNA, DNA adenine pairs with uracil and RNA adenine pairs with thymine.

III. The base pairing that occurs in a double DNA helix and when RNA is synthesised during transcription follows the rule that a purine pairs with a pyrimidine.

IV. The two Polynucleotides on a DNA molecule run in opposite directions so that the double helix formed has two strands that are parallel to each other.

A. I, II and III only

B. I, II and IV only

C. II, III and IV only

D. I, III and IV only

Answer: D



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80. Which of the following element is required in minor for the growth of plants but is extremely important for growth of animals?

- A. Nitrogen
- B. Oxygen
- C. Sodium
- D. Carbon

Answer: C



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81. Vital capacity of the lung is the sum of :

- A. Inspiratory capacity and expiratory capacity
- B. tidal volume, inspiratory reserve volume and expiratory reserve volume
- C. tidal volume , inspiratory reserve volume residual volume and expiratory reserve volume
- D. residual volume , inspiratory reserve volume and expiratory reserve volume

Answer: B



82. How many molecules of CO_2 will be required to produce 6 molecules of glucose?

A. 38

B. 36

C. 40

D. 32

Answer: B



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83. During protein synthesis , ribosome is found to be performing which of the following jobs ?

A. assemble amino acids in a chain

B. carry a copy of gene to cytoplasm

C. contain the code for the synthesis of a

protein

D. determine the order of bases in the protein

Answer: A



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84. Which enzyme catalyzes the link reaction ?

- A. Pyruvate carboxylase
- B. Malate dehydrogenase
- C. Pyruvate dehydrogenase

D. Acetyl CoA dehydrogenase

Answer: C



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85. There is a tRNA with anticodon UAC. If we apply the wobble hypothesis, then this tRNA can decode which of these codons?

A. It can decode AUG, AUG, AUU, AUA

B. It can decode AUG and AUG but not AUU and AUA

C. It can decode AUG but not AUG, AUU and AUA

D. It cannot decode any one of these codons AUG,AUG,AUU and AUA

Answer: C



86. Which of the following phytophormones are used to hasten the process of maturation in conifers

- A. ABA
- B. Auxin
- C. Gibberellin
- D. Cytokinin

Answer: C



- **87.** Collenchyma shows all of the following characteristic features, except
 - A. They possess thickened cell wall
 - B. They are dead at maturity
 - C. They possess vacuoles, for storage of food
 - D. They have cell wall which contains cellulose, pectin and hemicellulose

Answer: B

88. Which of these statements is true?

A. Eutrophication is always the result of anthrognic action .

- B. A water body severely polluted with organic matter will have a low biological oxygen demand
- C. In the town of Arcata, California biologists developed a series of ten

connected marshes over sixty hectares of marshland

D. Recycling is the only solution for the treatment of electronic waste.

Answer: D



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89. Which of these events are parts of mitosis

?

I. Interphase

II. Anaphase

III. Cytokinesis

A. I, II and III

B. I and III only

C. I only

D. II only

Answer: D



90. Vesicles can be formed by which structures

from the following?

	Cell Surface	Endoplasmic	Golgi
	Membrane	Reticulum	Body
I	Yes	Yes	Yes
П	Yes	Yes	No
Ш	Yes	No	Yes
IV	No	Yes	Yes

A. I

B. II

C. III

D. IV

Answer: A

